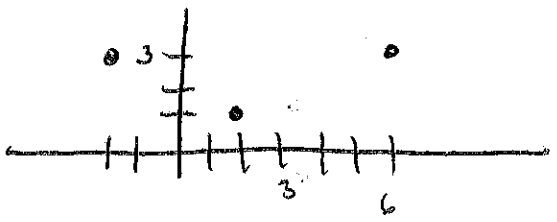
p101-104

9, 12-14, 20, 22, 24, 35, 37-45, 47, 50, 54

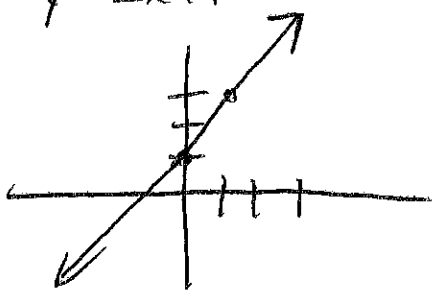
9. 

$D = \{-2, 2, 6\}$

$R = \{1, 3\}$

yes it is a fn.

12. $y = 2x + 1$



D: $\mathbb{R}$

R: $\mathbb{R}$

Function

13. $f(6) = 5(6) - 9 = 21$

14. $f(-2) = 5(-2) - 9 = -19$

20. $7x - y = -15$

$A = 7 \quad B = -1 \quad C = -15$

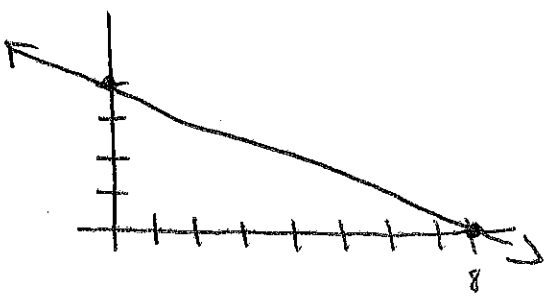
22. $8x - 9y = 72$

$A = 8 \quad B = -9 \quad C = 72$

24. $6x = -12y + 48$

$6x + 12y = 48$

$(0, 4) \quad (8, 0)$

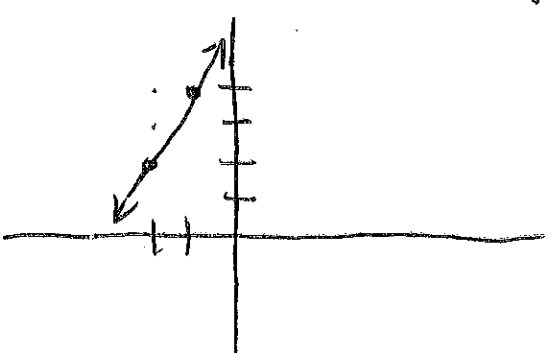


35. $y = 2x + 4$

$m = 2$

// slope $m = 2$

$(-2, 2)$



37. $(3,-8)\ (-3,2)$

$m = \frac{-10}{6} = -\frac{5}{3}$

$-8 = -\frac{5}{3}(3) + b$

$-3 = b$

$\boxed{y = -\frac{5}{3}x - 3}$

38. $(-1,2)$ $\parallel$ $x - 3y = 14$

$-3y = -x + 14$

$y = \frac{1}{3}x - \frac{14}{3}$

$m = \frac{1}{3}$

$2 = \frac{1}{3}(-1) + b$

$\frac{7}{3} = b$

$\boxed{y = \frac{1}{3}x + \frac{7}{3}}$

39. $(3,2)$ $\perp$ $4x - 3y = 12$

$-3y = -4x + 12$

$y = \frac{4}{3}x - 4$

$m = -\frac{3}{4}$

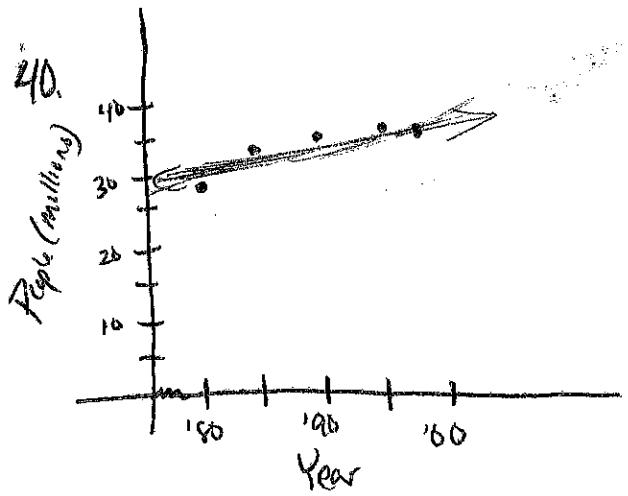
$2 = -\frac{3}{4}(3) + b$

$\frac{8}{4} = -\frac{9}{4} + b$

$17/4 = b$

$\boxed{y = -\frac{3}{4}x + \frac{17}{4}}$

40.



(80, 30)

(95, 35)

$m = \frac{35-30}{95-80} = \frac{5}{15} = \frac{1}{3}$

$y = \frac{1}{3}x + b$

$30 = \frac{80}{3} + b$

$\frac{90}{3} = \frac{80}{3} + b$

$\frac{10}{3} = b$

$\boxed{y = \frac{1}{3}x + \frac{10}{3}}$

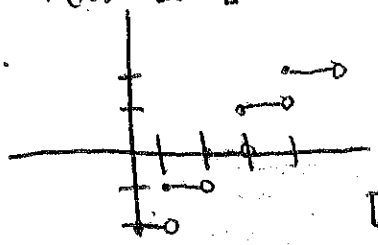
SAMPLE ANSWER

(41)

$y = \frac{1}{3}(110) + \frac{10}{3}$

(42) $\boxed{y = 40 \quad 40 \text{ million}}$

43. $f(x) = [\![x]\!] - 2$

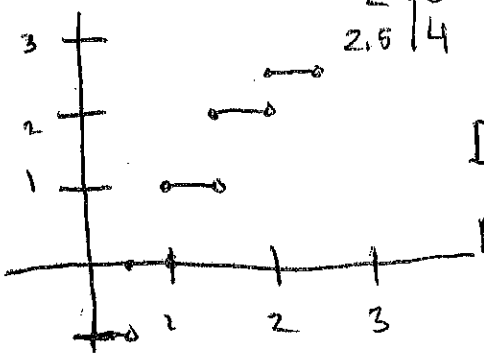


D: $\mathbb{R}$

R: $\mathbb{Z}$

44. $h(x) = [\![2x-1]\!]$

x	h(x)
1	1
1.2	1
1.5	2
1.9	2
2	3
2.5	4

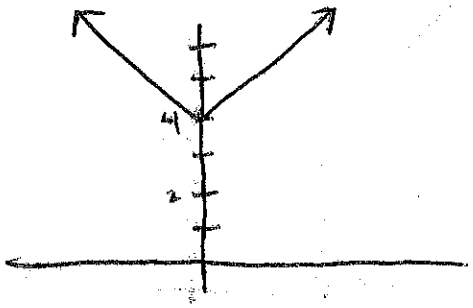


D: $\mathbb{R}$

R: $\mathbb{Z}$

45. $g(x) = |x| + 4$

V(0,4)

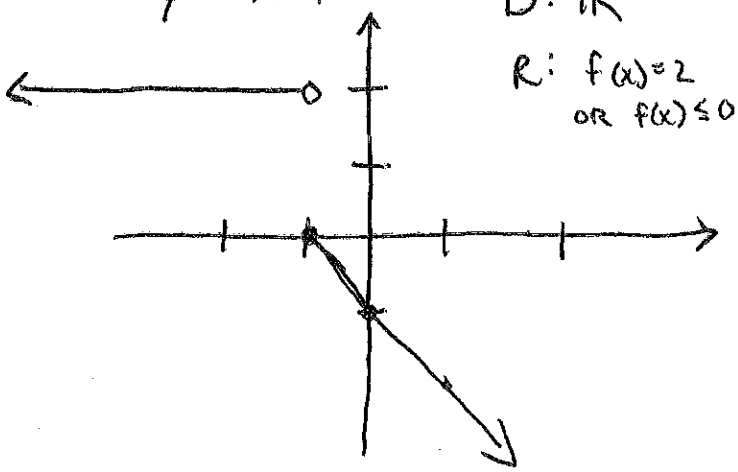


D: $\mathbb{R}$

R: $\mathbb{R}$

47. $$f(x) = \begin{cases} 2 & \text{if } x < -1 \\ -x-1 & \text{if } x \geq -1 \end{cases}$$

① $y = 2$ ② $y = -x - 1$

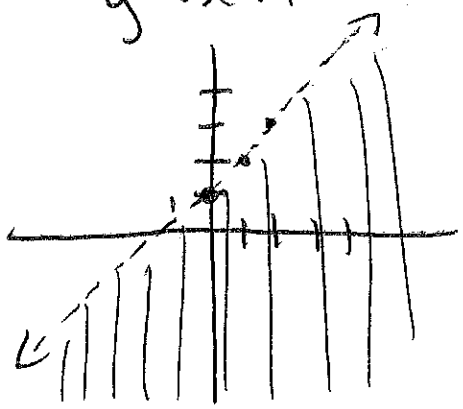


D: $\mathbb{R}$

R: $f(x) = 2$ OR $f(x) \leq 0$

50. $x > y - 1$

$y < x + 1$



54. $y > |x - 3|$ V(3,0)